



## Board Report

File #: 2017-0149, File Type: Contract

Agenda Number: 20.

### EXECUTIVE MANAGEMENT COMMITTEE MARCH 16, 2017

**SUBJECT: CONSULTING SERVICES FOR THE P2000 LIGHT RAIL VEHICLE (LRV) OVERHAUL PROGRAM, TECHNICAL AND PROGRAM MANAGEMENT SUPPORT SERVICES**

**ACTION: AWARD PROFESSIONAL SERVICES CONTRACT**

#### **RECOMMENDATION**

AWARD a cost plus fixed fee contract for Technical and Program Management Support Services under Contract No. OP20113000 for the **P2000 Light Rail Vehicle Overhaul Program Consultant Support Services, to CH2M Hill, Inc.**, in the not-to-exceed amount of \$5,829,626 for a period of 55 months from issuance of a Notice-to-Proceed (NTP) for the overhaul of 52 Siemens P2000 LRVs, subject to resolution of protest(s), if any.

#### **ISSUE**

Metro will require Technical and Program Management Support Services to provide oversight of the Rail Vehicle Overhaul Contractor in order to facilitate the timely overhaul and delivery of the P2000 LRVs and associated deliverables.

#### **DISCUSSION**

Metro operates 52 Siemens P2000 LRVs on the Green, Blue and Expo Lines. The P2000 LRVs were delivered between 2000 and 2003. The age of this fleet and accumulated mileage (average of 1.15 million miles) indicate it is timely to perform an overhaul of key subsystems.

The Consultant shall provide Metro with expert professional engineering, technical oversight, and program management support services as directed and required by Metro staff to ensure the Rail Vehicle Overhaul Contractor's performance is consistent with the delivery requirements of the Contract. Subject to Metro direction, the Consultant shall apply appropriate engineering, technical and program management resources to ensure the timely overhaul and delivery of the overhauled Vehicles and associated deliverables.

The scope of services shall include, but not be limited to, reviewing and preparation of correspondence in response to technical submissions; provide oversight of the project status; identify any variances from schedule and deliverable requirements and recommend corrective action; assess

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and report on project performance; support of project reviews; document control; oversight of the Rail Vehicle Overhaul Contractor's supply chain process; review and provide input on change order requests; test and inspection activity oversight; and other technical and program management support services as directed by Metro.

The approach to use a single consultant to provide both Technical and Program Management support is typical of the vast majority of Metro's rail vehicle capital projects. Separate consultants are used when, due to the scale and complexity of the project, it is a challenge for individual firms to adequately staff for the anticipated duration, thus limiting competition. As the scale and complexity of the overhaul is very limited, Metro's typical use of one consultant is employed.

The Diversity and Economic Opportunity Department (DEOD) has completed its initial evaluation of the Proposer's commitment to meet the twenty percent (20%) Race Conscious Disadvantage Business Enterprise (RC DBE) goal established for this project. CH2M Hill, Inc. exceeded the goal by making a 24.8% DBE commitment and is deemed responsive to the DBE requirements.

### **DETERMINATION OF SAFETY IMPACT**

The approval of this Contract award will have a direct and positive impact to system safety, service quality, system reliability, maintainability and overall customer satisfaction. The P2000 Light Rail Vehicle Overhaul Program will permit Metro to maintain the state of good repair (SGR) on the LRV fleet.

### **FINANCIAL IMPACT**

The total contract amount for this effort is \$5,829,626. \$2,304,000 is included in the FY18 budget in cost center 3043, Rail Vehicle Acquisition, Account 50316, Professional and Technical Services under project number CP206044, P2000 Light Rail Vehicle Overhaul Program.

Since this is a multi-year contract, the cost center manager and project manager will be responsible for budgeting the cost in future fiscal years, including the exercise of any options.

### **Impact to Budget**

The source of funds for this action is Federal Section 5337 State of Good Repair funds provided under the Transportation Improvement Program (TIP). Other eligible source of funds include Proposition A 35% and Measure R 2% which is eligible for rail capital activities. At this time, staff is developing guidelines for the Measure M (MM) Ordinance which may allow for the utilization of MM 2% State of Good Repair, MM 5% Rail Operations and MM 20%, Transit Operations as Rail State of Good Repair efforts are eligible uses for the MM source of funds. These guidelines are planned for adoption approximately midyear 2017. Concurrently, staff is actively pursuing additional State and Federal sources such as FAST Act and other eligible Federal sources to further supplement this project. Staff is also pursuing additional State and Local funding sources such as Cap and Trade and similar sources as they become available to meet the project funding needs.

### **ALTERNATIVES CONSIDERED**

Staff considered the following alternatives: using in-house Metro resources to perform this work. This approach is not recommended as Metro does not have sufficient resources and subject matter experts (SMEs) available to perform this work.

The Board of Directors may choose not to authorize the Contract award for this project; however, this alternative is not recommended by Metro staff because the Overhaul Program is critical to maintaining a SGR on the 52 Siemens P2000 LRVs and to enable the Maintenance department to effectively plan and schedule its work.

### **NEXT STEPS**

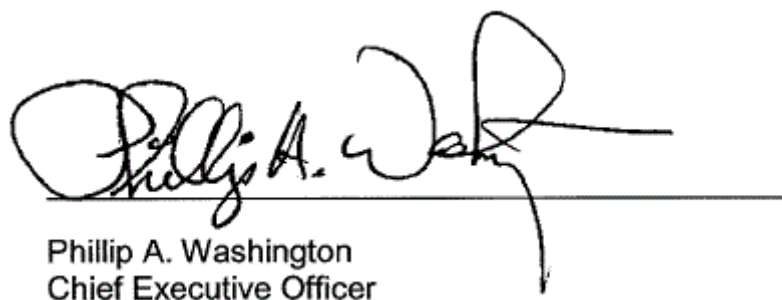
Upon Board approval, a contract will be awarded and a Notice-to-Proceed will be issued to CH2M Hill, Inc. Metro and CH2M Hill, Inc. will mobilize required resources and SMEs to ensure timely completion of deliverables by the Rail Vehicle Contractor.

### **ATTACHMENTS**

Attachment A - Procurement Summary  
Attachment B - DEOD Summary  
Attachment C - Funding/Expenditure Plan

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Phillip A. Washington  
Chief Executive Officer

**PROCUREMENT SUMMARY**  
**CONSULTING SERVICES FOR THE P2000 LIGHT RAIL VEHICLE (LRV)**  
**OVERHAUL PROGRAM, TECHNICAL AND PROGRAM MANAGEMENT**  
**SUPPORT SERVICES / OP20113000**

1.	<b>Contract Number:</b> OP20113000	
2.	<b>Recommended Vendor:</b> CH2M Hill	
3.	<b>Type of Procurement (check one):</b> <input type="checkbox"/> IFB <input checked="" type="checkbox"/> RFP <input type="checkbox"/> RFP-A&E <input type="checkbox"/> Non-Competitive <input type="checkbox"/> Modification <input type="checkbox"/> Task Order	
4.	<b>Procurement Dates:</b>	
	<b>A. Issued:</b> October 2, 2015	
	<b>B. Advertised/Publicized:</b> September 25, 2015	
	<b>C. Pre-proposal/Pre-Bid Conference:</b> October 15, 2015	
	<b>D. Proposals/Bids Due:</b> November 30, 2015	
	<b>E. Pre-Qualification Completed:</b> October 21, 2016	
	<b>F. Conflict of Interest Form Submitted to Ethics:</b> October 14, 2016	
	<b>G. Protest Period End Date:</b> March 20, 2017	
5.	<b>Solicitations Picked up/Downloaded:</b> 19	<b>Bids/Proposals Received:</b> 2
6.	<b>Contract Administrator:</b> Susan Dove	<b>Telephone Number:</b> (213) 922-7451
7.	<b>Project Manager:</b> Annie Yang	<b>Telephone Number:</b> (213) 922-3254

**A. Procurement Background**

This Board Action is to approve the award of Contract No. OP20113000 for technical consulting services for the P2000 Light Rail Vehicle Overhaul Program to assist and augment Metro staff to ensure the successful overhaul of the P2000 Light Rail Vehicles. The recommended consultant shall provide engineering and administrative resources to support Metro's Project Manager in the technical and program management of the project. Board approval of contract awards are subject to resolution of all properly submitted protests.

The RFP was issued in accordance with Metro's Acquisition Policy. This was a best value procurement, and the contract type is Cost-Plus Fixed Fee.

Nine amendments were issued during the solicitation phase of this RFP:

- Amendment No. 1, issued on October 12, 2015, modified pricing forms.
- Amendment No. 2, issued on October 21, 2015, extended the proposal due date to November 12, 2015.
- Amendment No. 3, issued on November 4, 2015, extended the proposal due date to November 19, 2015.
- Amendment No. 4, issued on November 13, 2015, extended the proposal due date to November 30, 2015.
- Amendment No. 5, issued on March 31, 2016, to clarify the evaluation criteria.

- Request for Clarification/Interviews was issued in lieu of Amendment No. 6, on August 12, 2016, after receipt of proposals.
- Amendment No. 7, issued on September 26, 2016, was issued after receipt of proposals to invite firms to submit Best and Final Offers (BAFO's) as a result of revisions in the labor mix allocation.
- Amendment No. 8, issued on September 30, 2016, was issued after receipt of proposals to modify pricing forms.
- Amendment No. 9, issued on January 20, 2017, was issued to clarify the statement of work and commercial terms.

A total of two proposals were received on November 30, 2015. The initial proposal evaluation resulted in a series of clarifications to obtain further details from both proposers. Discussions and negotiations with the consultants were postponed until March 2016 when P2000 overhaul contractor proposals were due. The procurement process for the technical consulting contract was delayed in order to coincide with the award of the P2000 overhaul contract. Clarification interviews and presentations were conducted in August 2016. As a result of the clarification interviews, Metro staff concluded that the labor hour allocation needed to be revised higher to more accurately reflect Metro's operational needs on the P2000 Overhaul Contract. Therefore, requests for Best and Final offers (BAFO's) included an adjusted labor mix allocation. BAFO's were received on October 7, 2016. To ensure that the P2000 overhaul contract and the consulting contract were awarded simultaneously, the recommendation for award of the consulting contract was delayed until a full re-assessment of the P2000 Overhaul Project was completed.

As a result of additional changes in programmatic requirements in the P2000 Overhaul project, a request for revised Best and Final Offer was issued on January 20, 2017. Revised BAFO proposals for the P2000 Light Rail Vehicle Overhaul Consultant Support Services were received on January 27, 2017.

## **B. Evaluation of Proposals**

The Proposal Evaluation Team consisting of staff from Metro's Rail Vehicle Acquisition Department, Rail Vehicle Engineering, and Rail Fleet Services convened and conducted a comprehensive technical evaluation of the proposals received. The proposals were evaluated based on the following evaluation criteria and weights:

The firm's degree of skills and experience	30% percent
Staff quality and technical expertise	20% percent
Understanding of work and appropriateness of approach for implementation	20% Percent
Price	30% percent

The evaluation criteria are appropriate and consistent with evaluation criteria developed for similar Best Value procurements. Several factors were considered when developing these weights, giving the greatest importance to the firm's skills, staff experience, and price.

All proposals were determined to be within the competitive range. The firms within the competitive range are listed below in alphabetical order:

1. CH2M Hill
2. Virginkar Associates/Parsons Brinckerhoff – Joint Venture

On August, 12, 2016, clarification/interviews were conducted. The firms' project managers and key team members had an opportunity to present each team's qualifications and respond to the evaluation team's questions. Each team's presentation addressed the requirements of the RFP, experience with all aspects of the required tasks, and stressed each firm's commitment to the success of the project. Also highlighted were staffing plans, work plans, and perceived project issues. Each team was asked questions relative to each firm's proposed alternatives and previous experience.

Negotiations were conducted with both firms. On September 25, 2016, Best and Final Offers (BAFOs) were requested. On October 7, 2016, two BAFO proposals were received. Final revised pricing was received on January 27, 2017.

The PET evaluated the BAFO's and determined that CH2M Hill's was the most advantageous to LACMTA based upon the proposal evaluation criteria. CH2M Hill's proposal exceeded the RFP's requirements based on the firm's and staff's experiences on similar projects. CH2M Hill demonstrated its expertise in rail vehicle engineering consulting services by providing a comprehensive implementation plan showing specific consultant staff responsible for managing each major milestone during the program support services. CH2M Hill's strengths are listed below:

- Proposed a Senior Schedule Analyst who strengthened the team's skill, quality, technical expertise, and experience based on the scheduler's education and experience background.
- Proposed a Systems Integrator Engineer with extensive background and systems integration experience which enhanced the team in the critical area of system integration.

### **Qualifications Summary of Firms Within the Competitive Range:**

#### **CH2M Hill**

CH2M Hill provided technical consulting services to LACMTA for development of the A650 technical specification and commercial requirements. CH2M Hill currently provides program support services for the P3010 Light Rail Vehicle Project. Since it has extensive experience with Metro projects, the firm will be able to begin work immediately as an integrated team to support the design development and to oversee the timely overhaul of the P2000 rail cars.

Other similar projects include the Midlife overhaul of CAF Heavy Rail Vehicle for the Port Authority of Allegheny County, (PAAC) Pittsburgh, PA. CH2MHill was also awarded the Service, Maintenance and Reliability Support contract for Massachusetts Bay Transportation Authority (MBTA).

#### **VIRGINKAR/PARSONS BRINCKERHOFF – JOINT VENTURE**

Both firms within the Joint Venture overall had experience working on overhaul projects. These project include the Massachusetts Bay Transit Authority (MBTA) on the 25 GP40 MC Diesel

Electric Locomotive Project and the Siemens Light Rail Vehicle Overhaul Project for the Port Authority of Allegheny County (PAAC). Although the team has experienced staff, it proposed less experienced systems integration engineers. The systems integration engineer position is critical to success of the project. Virginkar/Parsons Brinckerhoff Joint Venture is technically capable of performing the work.

1	Firm	Average Score	Factor Weight	Weighted Average Score	Rank
2	<b>Firm 1 CH2M Hill</b>				
3	Skills and Experience the Firm	79.17	30.00%	23.75	
4	Staff Quality and Technical Experience	86.50	20.00%	17.30	
5	Understanding of the Work	87.50	20.00%	17.50	
6	<b>Price</b>		30.00%	30.00	
7	<b>Total</b>		100.00%	88.55	<b>1</b>
8	<b>Firm 2 Virginkar/PB (Joint Venture)</b>				
9	Skills and Experience of the Firm	69.17	30.00%	20.75	
10	Staff Quality and Technical Experience	68.33	20.00%	13.67	
11	Understanding of the Work	70.83	20.00%	14.17	
12	Price		30.00%	27.84	
13	<b>Total</b>		100.00%	76.43	<b>2</b>

### **C. Cost/Price Analysis**

The recommended Not-To-Exceed Price has been determined to be fair and reasonable based on, an independent cost estimate, MAS audit findings, cost analysis of direct rates and provisional overhead rates, technical evaluation, fact finding, and negotiations. The negotiated NTE prices increased from the original proposed amounts for both Proposers after discussions led to a higher level of direct hours required.

	Proposer Name	Proposal Amount	Metro ICE	Negotiated or NTE amount
1.	CH2M Hill	\$5,770,144	\$5,702,539	\$5,829,626
2.	Virginkar/Parsons	\$6,148,646	\$5,702,539	\$6,282,272

#### **D. Background on Recommended Contractor**

The recommended firm, CH2M Hill, has been in business for over 70 years and is a global engineering company that provides consulting, design, construction, and Rail Vehicle Program Support Services.

CH2M Hill proposed Senior Systems Integrator Engineers who combined have over 70 years of experience in systems integration in the Rail Vehicle industry and were involved with rail vehicle overhaul procurements from technical specification development to final acceptance. Overall, the proposed staff clearly exceeded the minimum requirements. All proposed staff including subcontractors has extensive technical and program management support experience.



## DEOD SUMMARY

**CONSULTING SERVICES FOR THE P2000 LIGHT RAIL VEHICLE (LRV)  
OVERHAUL PROGRAM, TECHNICAL AND PROGRAM MANAGEMENT  
SUPPORT SERVICES / OP20113000**

**A. Small Business Participation**

The Diversity and Economic Opportunity Department (DEOD) established a 20% Disadvantaged Business Enterprise (DBE) goal for this solicitation. CH2M Hill, Inc. exceeded the goal by making a 24.81% DBE commitment.

<b>Small Business Goal</b>	<b>20% DBE</b>	<b>Small Business Commitment</b>	<b>24.81% DBE</b>
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	<b>DBE Subcontractors</b>	<b>Ethnicity</b>	<b>% Committed</b>
1.	Virginkar & Associates	Subcontinent Asian American	18.36%
2.	Parthenon Corporation	Hispanic American	6.00%
3.	Langford & Carmichael	Asian Pacific American	0.45%
<b>Total Commitment</b>			<b>24.81%</b>

**B. Living Wage and Service Contract Worker Retention Policy Applicability**

The Living Wage and Service Contract Worker Retention Policy is not applicable to this Contract.

**C. Prevailing Wage Applicability**

Prevailing wage is not applicable to this Contract.

**D. Project Labor Agreement/Construction Careers Policy**

Project Labor Agreement/Construction Careers Policy is not applicable to this Contract.

**ATTACHMENT C**

**P2000 LIGHT RAIL VEHICLES OVERHAUL PROGRAM CONSULTANT SUPPORT SERVICES  
FUNDING/EXPENDITURE PLAN**

	ITD thru FY16	FY17	FY18	FY19	FY20	FY21	FY22	Total	% of Total
<b>Uses of Funds</b>									
Midlife Overhaul 52 Siemens LRVs	\$0	\$7,003,993	\$14,007,987	\$27,503,993	\$45,000,000	\$40,000,000	\$6,563,894	\$140,079,867	87.1%
Professional Services	\$838,961	\$84,120	\$1,387,200	\$1,956,133	\$1,974,333	\$1,460,933	\$268,000	\$7,969,680	5.0%
MTA Administration	\$999,379	\$265,000	\$420,000	\$450,000	\$450,000	\$450,000	\$390,000	\$3,424,379	2.1%
Contingency	\$0	\$0	\$0	\$0	\$0	\$0	\$9,326,074	\$9,326,074	5.8%
<b>Total Project Cost</b>	<b>\$1,838,340</b>	<b>\$7,353,113</b>	<b>\$15,815,187</b>	<b>\$29,910,126</b>	<b>\$47,424,333</b>	<b>\$41,910,933</b>	<b>\$16,547,968</b>	<b>\$160,800,000</b>	<b>100%</b>
<b>Sources of Funds</b>									
<b>Local (PA Rail 35%) / State / Federal</b>		\$7,353,114	\$15,815,187	\$29,910,126	\$47,424,333	\$41,910,933	\$16,547,968	\$160,800,000	100%
<b>Total Project Funding</b>	<b>\$1,838,340</b>	<b>\$7,353,113</b>	<b>\$15,815,187</b>	<b>\$29,910,126</b>	<b>\$47,424,333</b>	<b>\$41,910,933</b>	<b>\$16,547,968</b>	<b>\$160,800,000</b>	<b>100%</b>

\*\* Staff will pursue additional federal funds that may become available through MAP-21 or other federal sources for this project to maximize availability of local fund sources for Operations use. Staff will also utilize other State and Local funding sources as opportunities arise such as Cap and Trade or other new sources. Measure M 2%, 5% and 20% fund source guidelines currently under development may also allow for future use of Measure M funds to support this effort.